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EXAMINER	
CRAIG, DWIN M	

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2123	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/812,306	KUBISCHTA ET AL.	
	Examiner	Art Unit	
	DWIN M. CRAIG	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 December 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-22 have been presented for reconsideration based on Applicants' arguments.

Response to Arguments

2. Applicants' arguments presented in the 12/16/2008 responses have been fully considered; the Examiner's response is as follows:

2.1 Regarding Applicants' response to the 35 U.S.C. 102(b) rejections of claims 1-22, Applicants' argued on pages 7-9 of the 12/16/2008 responses that;

"Applicants contest the finding that Liu teaches a continuous real-time clock being provided to a non real-time simulator as recited in claim 1. The Office Action equates the claimed non-real time simulator with Liu's teachings of the OPNET simulation tool. As disclosed by Liu 5:51-55, the OPNET simulation tool is deployed on each of the subsystem platforms SP. Thus, to arguably meet the claim language of providing a continuous real-time clock to a non real-time simulator," Liu would need to disclose that its subsystem platforms SP (either with the OPNET tool or some other simulation package) receive a real time clock."

The Examiner respectfully traverses Applicants' argument, *Liu* in Col. 11 lines 39-50 clearly teaches that a real-time clock is being synchronized between a non-real-time simulator "Opnet" and a real-time simulator.

On page 8 Applicants' further argued;

"In addition, Liu does not disclose the claim 1 language "synchronizing a simulation clock of the non real-time simulator with the continuous real-time clock on a continuous basis." As noted above, it is the synchronizer 62 within system controller 60 that determines whether a simulation event can or cannot be executed. Liu discloses at 11:51-65 that the system controller

60 examines: (1) current simulation time Tsim; (2) real-time Treat; and (3) scheduled simulation time for the event Tev. Assuming for the sake of argument that "real-time Treat" equates to a "real time clock," then Liu shows specifically at 11:54-65 that the simulation time Tsim is compared against the real time Treat, and that simulation events are triggered based on that comparison. But there is no disclosure that the simulation time Tsim is synchronized with the real time Treat as would be required by claim 1."

The Examiner respectfully traverses Applicants' arguments, Applicants' argued that "real-time Treat" does not equate to a "real-time clock" the Examiner does not agree with this interpretation and points to *Liu* in Col. 11 lines 39-50 which clearly teaches that a real-time clock is being synchronized between a non-real-time simulator "Opnet" and a real-time simulator.

Further, there is no requirement that Tsim is synchronized with the real-time clock, only that Liu teaches synchronization between a real-time simulator and a non-real-time simulation which it does in Col. 11 lines 39-50. It is noted that all simulators have clocks and that Liu teaches a real-time and non-real time simulators and that these simulators are synchronized, therefore Liu meets the call of the claim.

Further on page 8 of the 12/16/2008 responses Applicants' argued;

"The Liu teachings cited by the Office Action therefore do not support a finding of synchronization (particularly at the SPs) of a simulation clock with a real time clock."

The Examiner respectfully traverses Applicants' arguments, Liu teaches synchronization between a real-time simulator and a non-real-time simulator using a clock, see Col. 11 lines 39-50.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-22 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,134,514 to Liu et al.

3.1 As regards independent claims 1, 7 and 17 and using independent claim 1 as an example, *Liu et al.* discloses, *providing a continuous real-time clock to a non real-time simulator* (Col. 11 lines 40-67 and Col. 12 lines 1-6 more specifically starting on line 40, "Synchronization between real-time events (occurring in the physical network) and simulated events at the SPs, requires that the determination involved in module **110** of FIG. **9** be made on the basis of a real time clock." Here is a teaching of a continuous real-time clock being provided to a non-real time simulator, in this case OPNET, more specifically see the teaching in Col. 5 lines 51-63 more specifically starting on line 52 "In the preferred embodiment, the simulation tool deployed is OPNET- a commercially available discrete event simulation tool suite intended for communications networks in general.") and

Synchronizing a simulation clock of the non-real time simulator with the continous real-time clock on a continuous bases (see Figure 1 and Col. 5 lines 60-63 and starting on Col. 8 line 27, "Each of the SPs include a synchronizer feature that capitalizes on event scheduling information provided by OPNET at each SP, and interacts with a synchronizer of the system controller **60**..." and Col. 9 line 34, "Upon detection of a synchronization event, the kernel

releases control back to the synchronizer and the processing beginning in module **30** is repeated..." and all of Col. 11 lines 11-67 and Col. 12 lines 1-12) and

advancing the non real-time simulator to a first time based on the simulation clock reaching the first time (Col. 8 lines 2-9 more specifically, "...and the advancing of a simulation clock. Since all future simulation events are stored in an event list and forwarded in an ascending order of simulation time, the pace of the execution of the simulation events can be regulated by manipulating the events in the event list...").

3.2 As regards claims 2, 8 and 18 and using claim 2 as an example, *Liu et al.* discloses *advancing the non-real-time simulator to a second time based on the simulation clock reaching the second time* (Col. 8 lines 2-9 more specifically, "...and the advancing of a simulation clock. Since all future simulation events are stored in an event list and forwarded in an ascending order of simulation time, the pace of the execution of the simulation events can be regulated by manipulating the events in the event list..." see also Figure 6).

3.3 As regards claims 3, 9 and 19 and using claim 3 as an example, *Liu et al.* discloses, *receiving an event for the non-real time simulator at a second time on the continuous real time clock* (Figure 6 and Col. 8 lines 2-9) *and advancing the non-real time simulator to a time on the simulation clock equivalent to the second time on the continuous real time clock* (Figure 6 and Col. 8 lines 2-9).

3.4 As regards claims 4 and 20 and using claim 4 as an example, *Liu et al.* discloses, *submitting the event to the non-real time simulator for simulation at the time on the simulation clock* (Figure(s) 6, 8 & 9 and the descriptive text further see Col. 11 lines 1-10 this portion

describes how the simulation clock is advanced depending on which simulator is being executed, see also Col. 11 lines 41-65, see also Figure 12 and the descriptive text).

3.5 As regards claims 5, 6, 21 and 22 and using claim 5 as an example, *Liu et al.* discloses the functional equivalent of *instantiating a call-back function* see (Col. 10 lines 38-63, note the discussion about how when the process is complete, processing *returns* to module **20,** further see Col. 9 lines 18-36 more specifically, "Module **85** then *calls* module **100** so that a *synchronization event* is then started behind the updated event" note that one module is *calling* another module, this describes the functional equivalent of using a *callback*).

3.6 As regards claim 10, *Liu et al.* discloses, *wherein the controller module is further configured to map the event time to a simulation event time and to advance the non real-time simulator to the simulation event time* (Figure(s) 1, 6 & 12 and Col. 5 lines 60-63 and Col. Col. 8 lines 1-10 and Col. 8 lines 28-56).

3.7 As regards claim 11 *Liu et al.* discloses, *wherein the controller module is further configured to forward the event to the non real-time simulator* (see Figure 6 and the descriptive text).

3.8 As regards claim 12 *Liu et al.* discloses, *a configuration entity configured to provide configuration to the control module* (here is a teaching that the controller is *configured* before use, see Figure 7 item 10 and Figure 8 item 60 and Figure 9 item 10 and Figure 11 and Col. 9 lines 57-67 and Col. 10 lines 1-27 more specifically, starting at Col. 9 line 57, "Referring now to FIG. **9,** the synchronizer is initialized in step **10**." The synchronizer is part of the controller see Figure 8).

3.9 As regards claim 13 *Liu et al.* discloses the same functionality of *wherein the configuration entity is a scenario generator* (see Col. 8 lines 5-8 which describe the list of events in an event list, that event list is functionally the same as a scenario.).

3.10 As regards claim 14, *Liu et al.* discloses, *a messaging entity configured to provide messages for simulation to the controller module* (Figures 11 & 12 and the descriptive text).

3.11 As regards claim 15, *Liu et al.* discloses, *wherein the messaging entity is a radio emulator* (Col. 5 lines 66-67 and Col. 6 lines 1-6 and Col. 7 lines 6-64, "In other words, simulated radio nodes could not function properly…").

3.12 As regards claim 16, *Liu et al.* discloses *wherein the controller module further comprises : a real-time controller loop configured to the non real-time simulator a traffic output module adapted to accept output messages from the non real-time simulator a traffic input module adapted to receive input messages from a messaging entity; and a packet queue configured to buffer input and output messages* (Figures 1-12 and the descriptive text more specifically see Col. 5 lines 37-67 and Col. 6 lines 1-7 see also Col. 7 lines 56-67 and Col. 8 and Col. 9 lines 1-36 and Col. 11 lines 40-67 and Col. 12 lines 1-6).

Conclusion

4. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DWIN M. CRAIG whose telephone number is (571)272-3710. The examiner can normally be reached on 10:00 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul L. Rodriguez can be reached on (571) 272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dwin M Craig/
Examiner, Art Unit 2123

/Paul L Rodriguez/
Supervisory Patent Examiner,
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